

FIG. 1

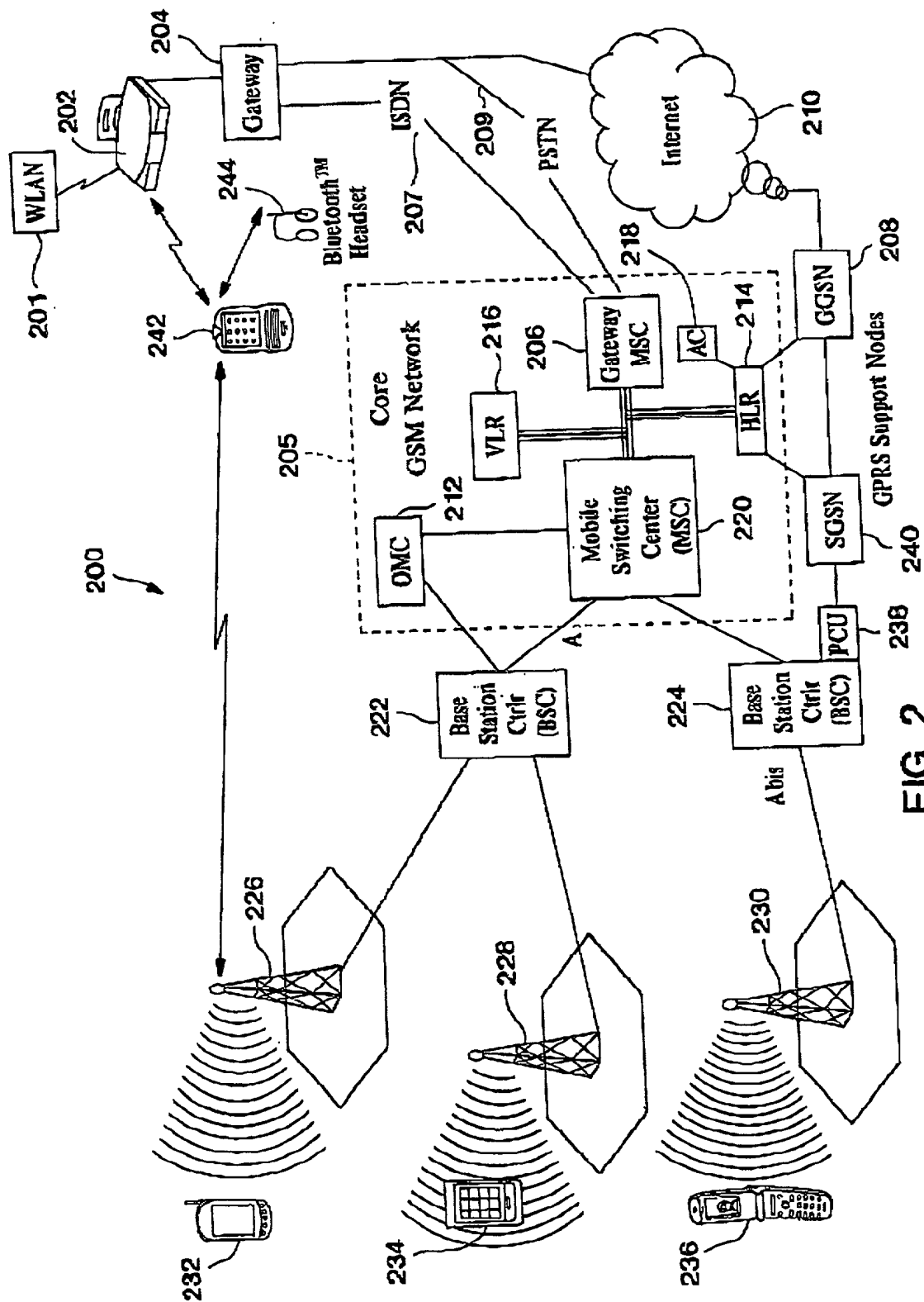
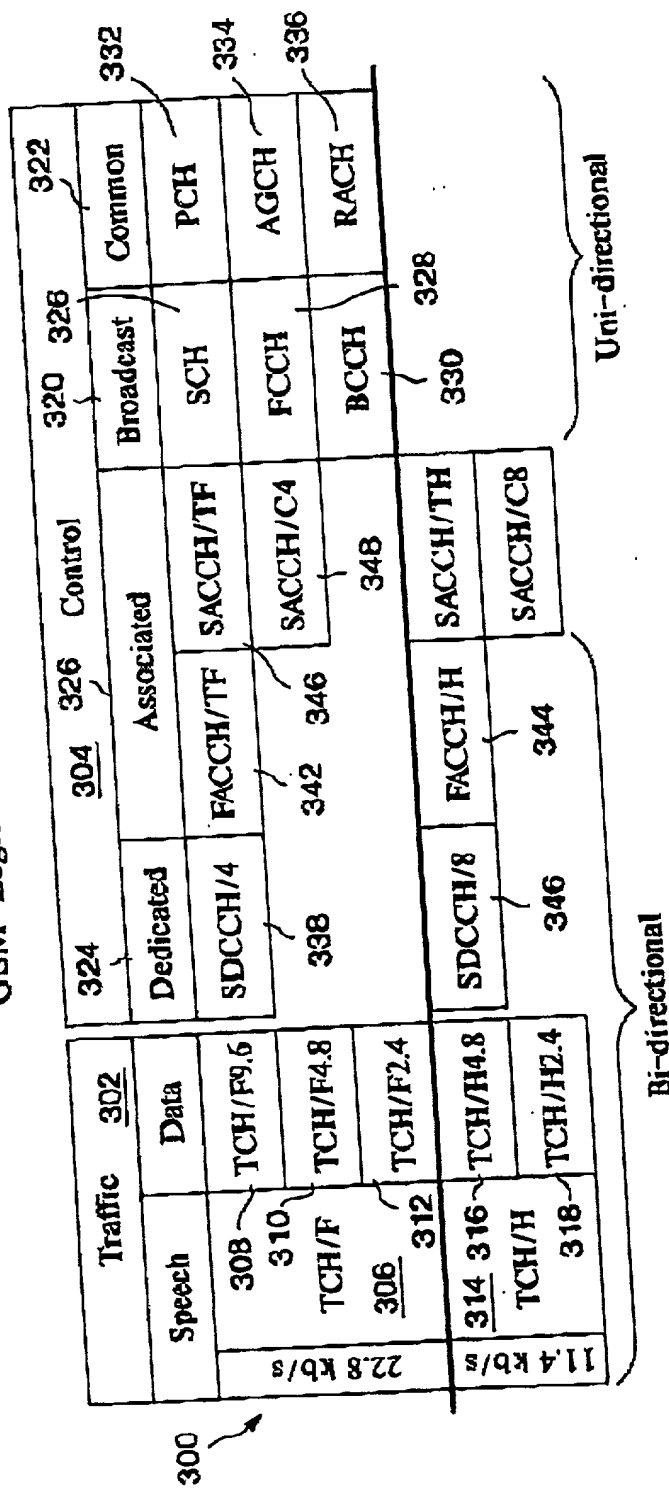


FIG. 2

GSM-Logical Channel Types



- TCH: Traffic - speech or data.
- SDCCH: Standalone Dedicated - intermediate channel for authentication and call setup.
- FACCH: Fast Access Control - Urgent commands to initiate hand-over - same information as SDCCH.
- SACCH: Slow Access Control - link maintenance (power, timing advance, e.t.c.)
- FCCH: Frequency Correction - MU clock and frequency synchronization - not for equalization.
- SCH: Synchronization - MU frame and slot time synchronization.
- BCCH: Broadcast Control - network configuration parameters for access.
- PCH: Paging - alert for incoming call.
- AGCH: Access Grant - BS provides parameters for access to dedicated channel for call setup.
- RACH: Random Access - MU posts requests to BS.

FIG. 3

Call Establishment Process—Mobile Originated

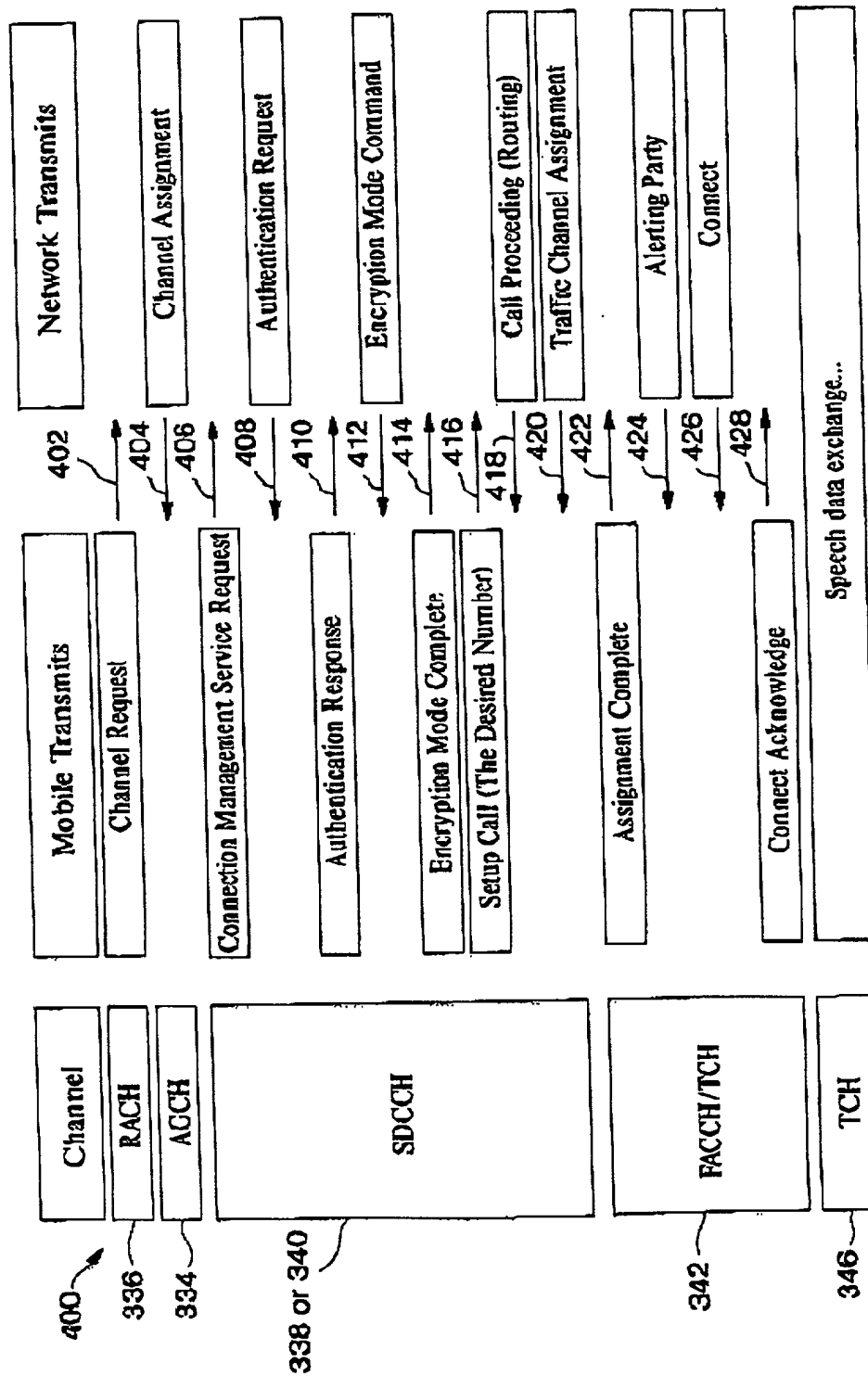


FIG. 4

Receiving a Call-Mobile Terminated

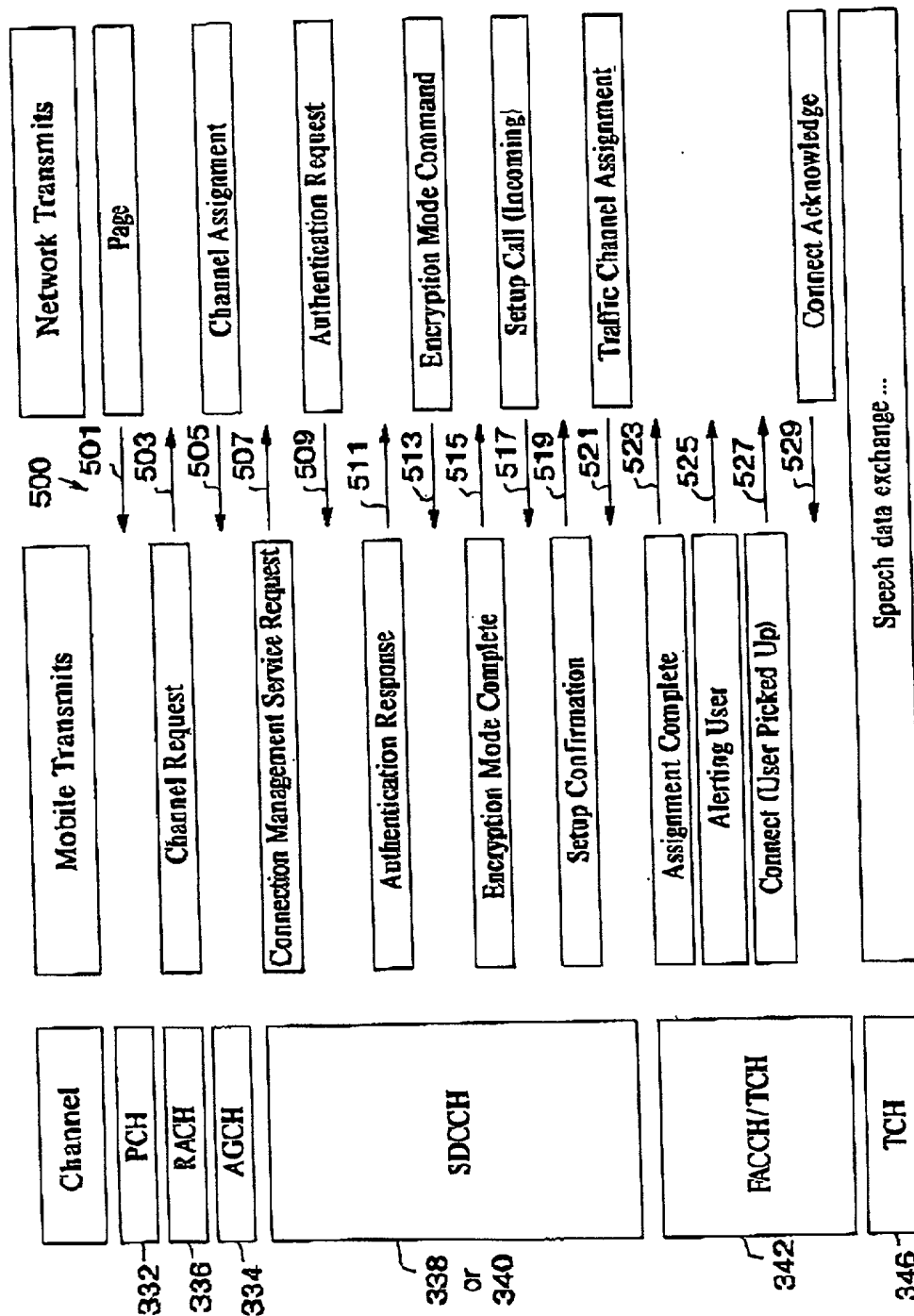


FIG. 5

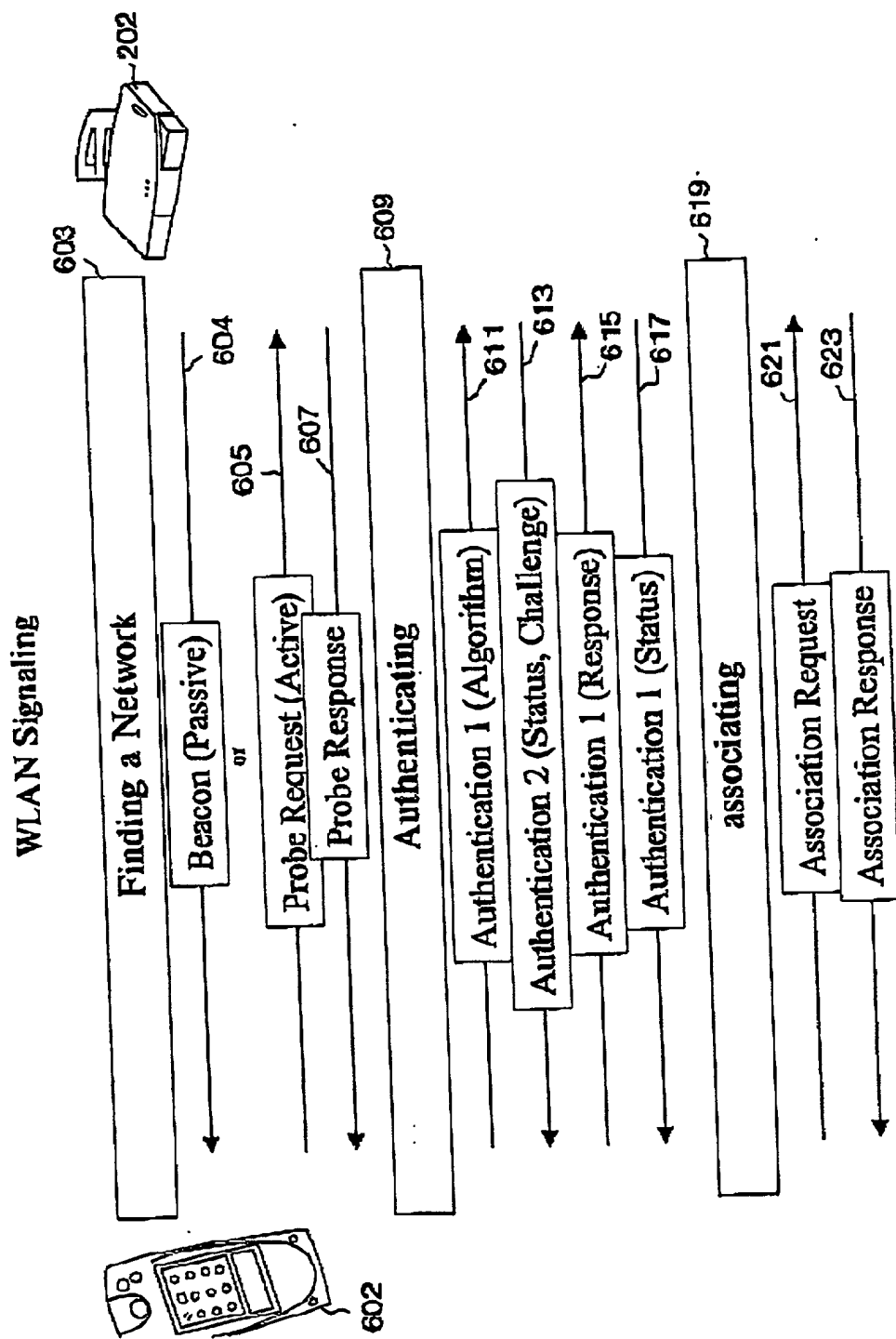
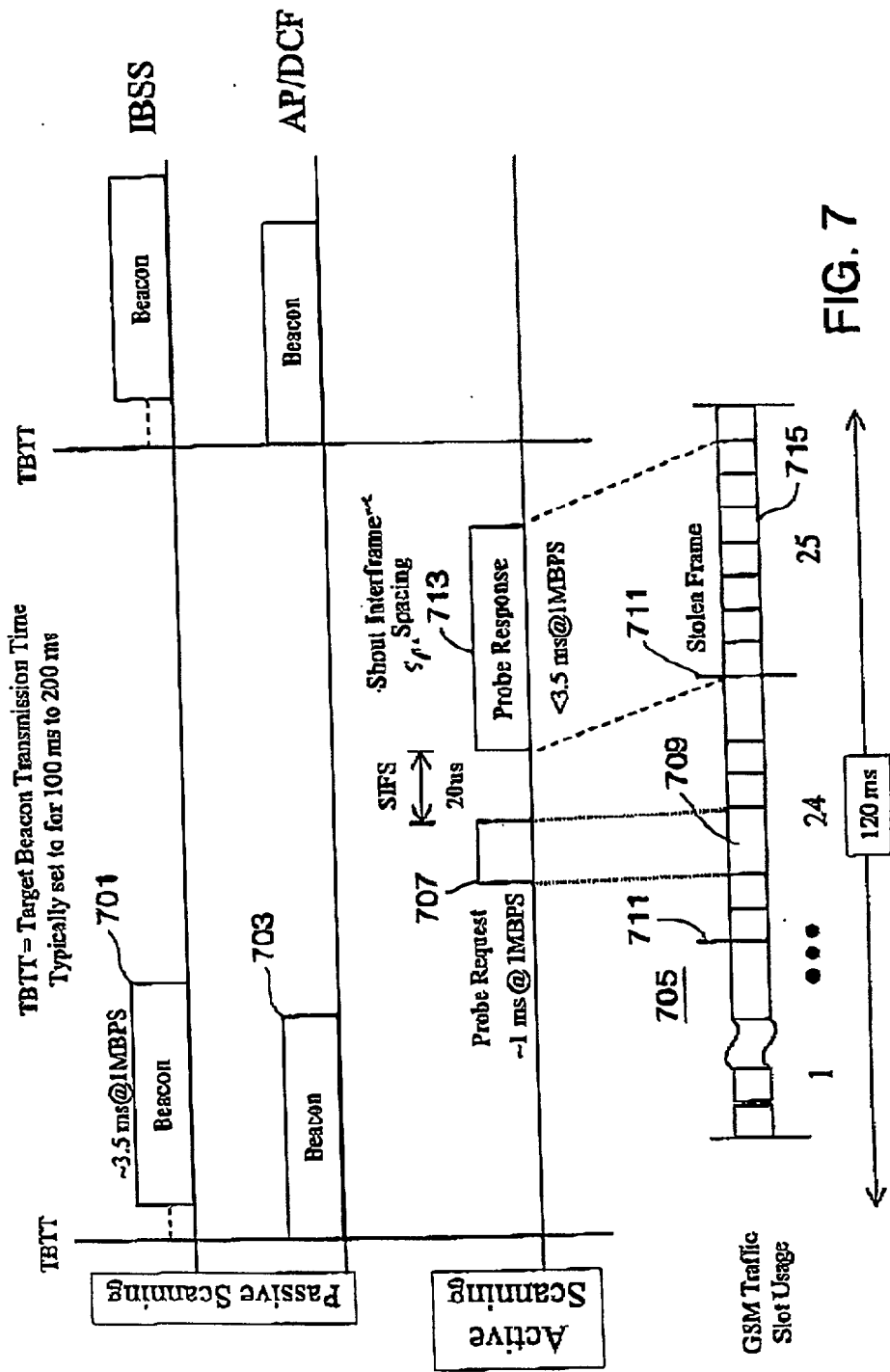


FIG. 6

Interleaving WLAN Signaling with GSM Traffic For example, Finding a Network



Interleaving VoIP Traffic with GSM Signaling

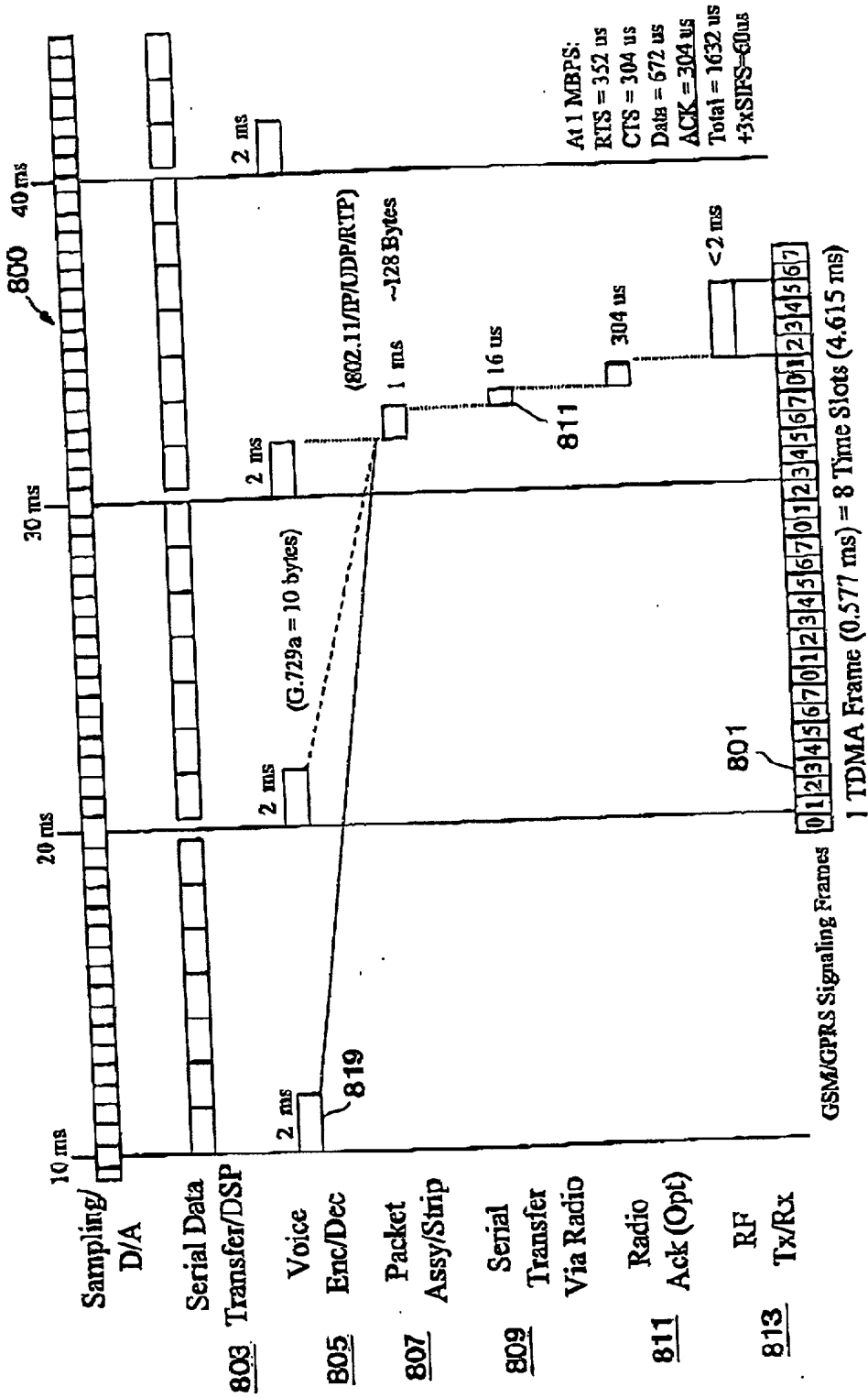


FIG. 8

Current/Legacy Terminal Architecture

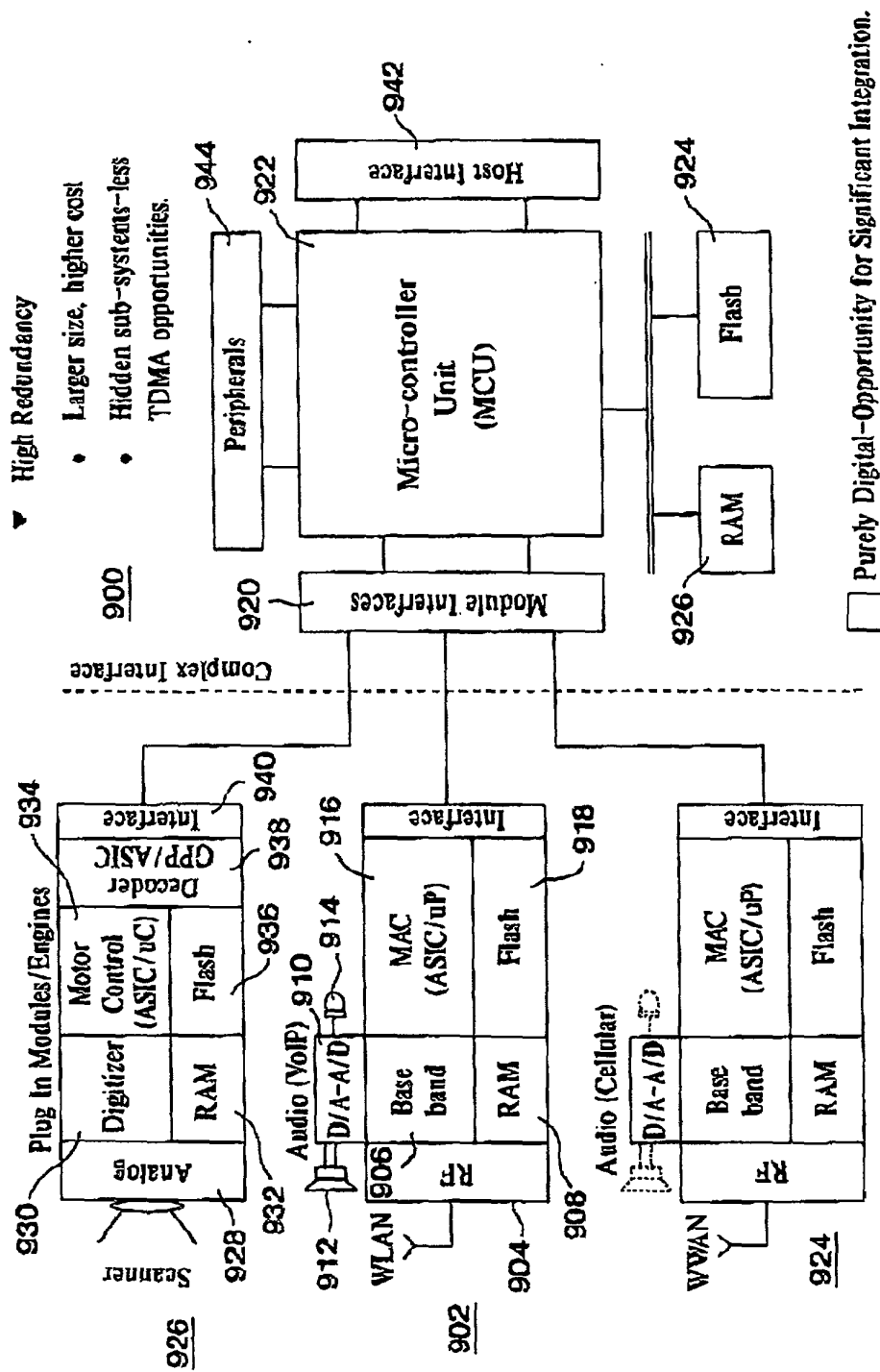


FIG. 9

SVR Interface

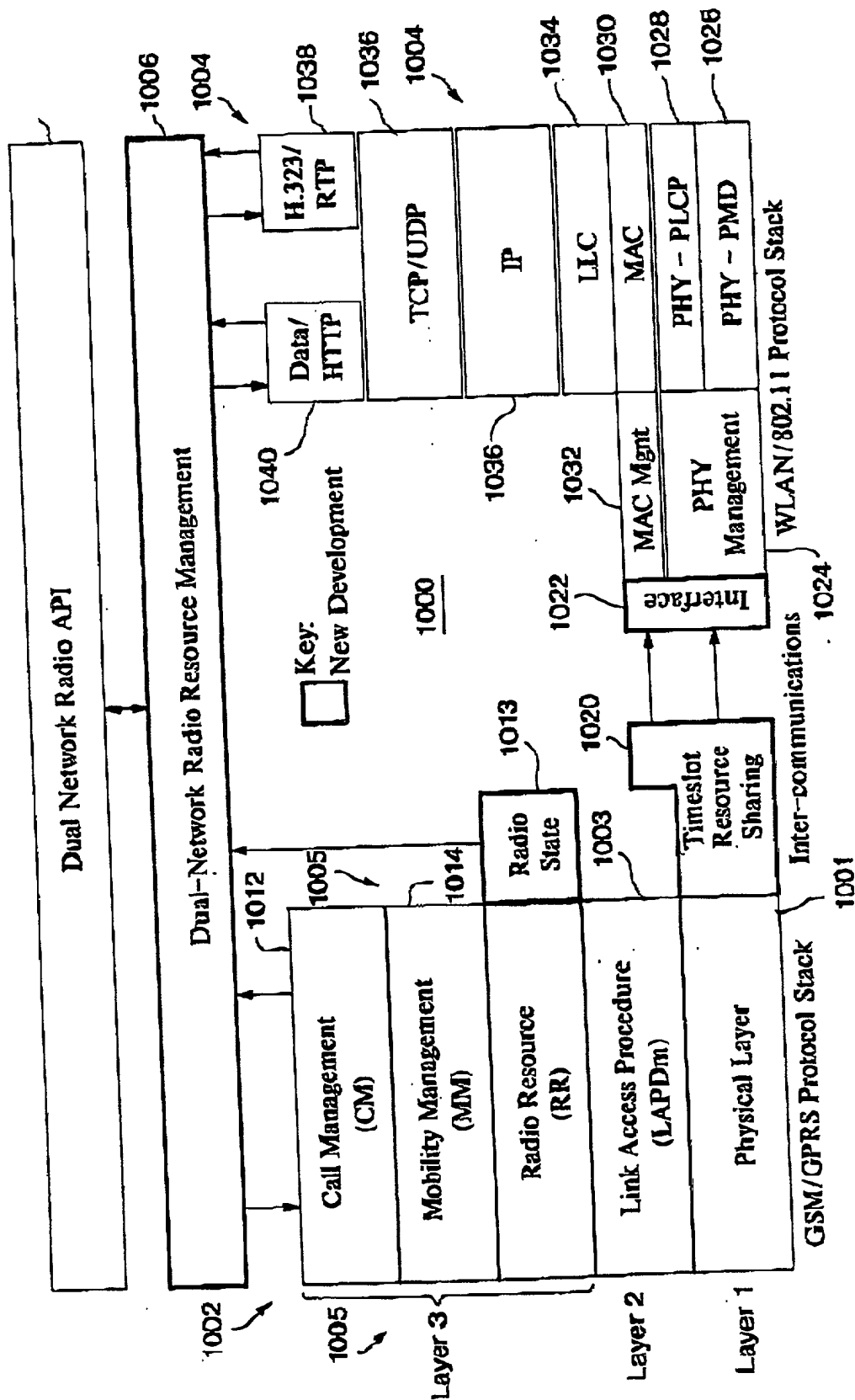


FIG. 10

Conditions for Seamless Vertical Roaming

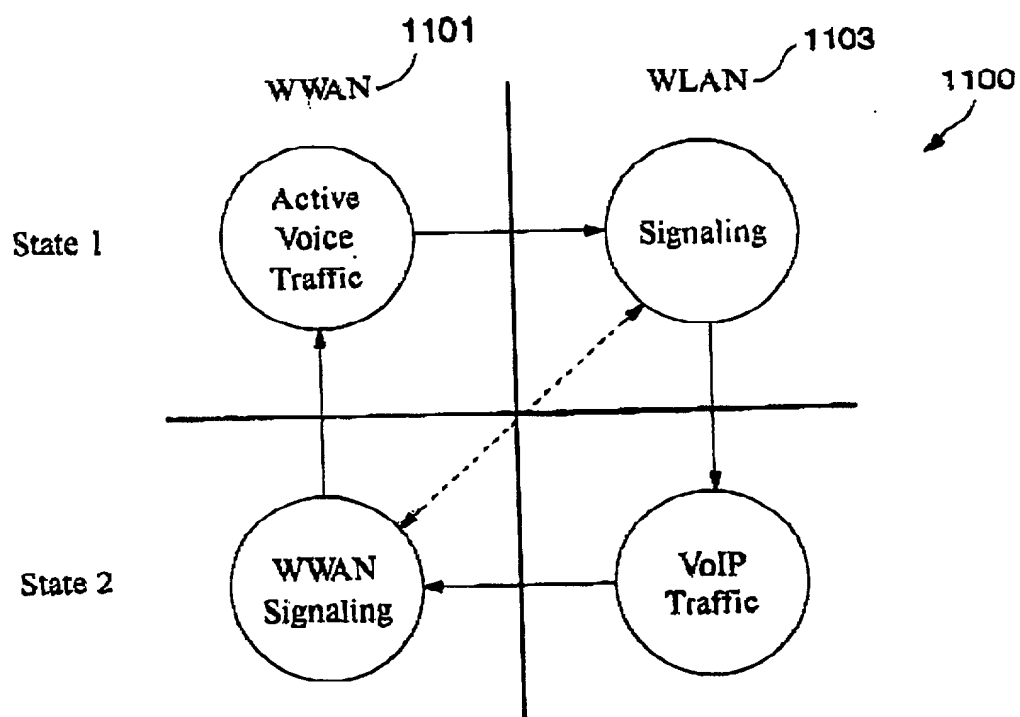


FIG. 11

SVR from WLAN to WWAN (GM)

- ▼ VoIP call is established between WLAN Radio B and Party C
- ▼ Dual-Mode Radio sub-system requests roaming:
 - WLAN radio places conference call through WLAN gateway to WWAN radio A.
 - WWAN radio A automatically accepts the call.
- ▼ Now WWAN radio A is connected to traffic between Party C and WLAN radio B.
- ▼ The dual-mode radio system confirm this and then drops the WLAN radio B connection.
 - WLAN gateway maintains the conference call if it would be otherwise dropped when gateway disconnects.

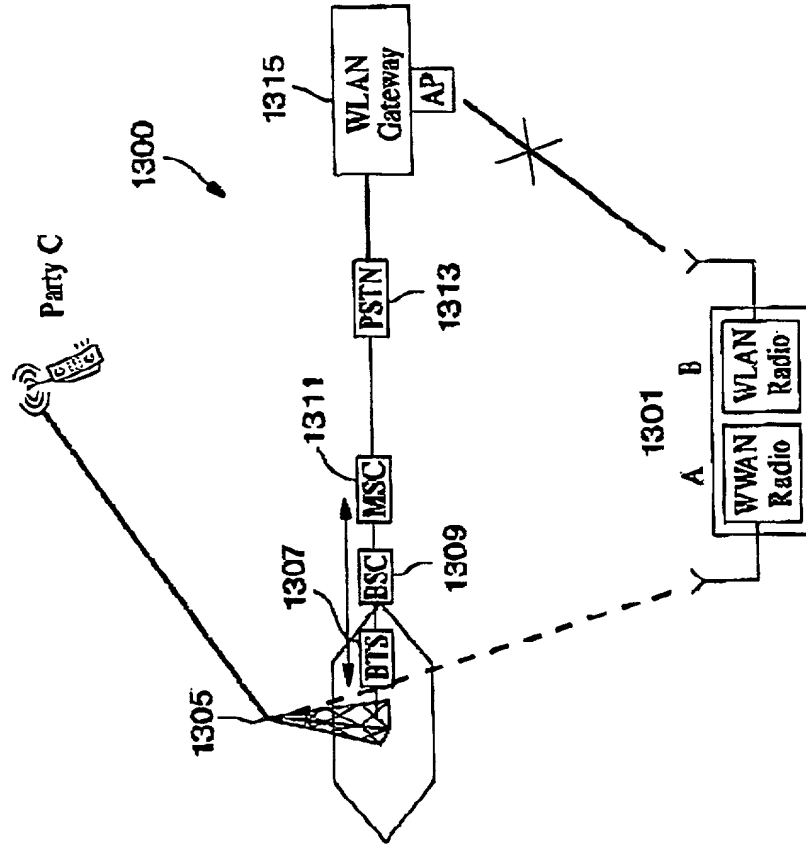


FIG. 13